

## ATTACHMENT A, DATA SUBMISSION SPECIFICATION

*February 10, 2010*

This document provides data specifications and delivery options for Indiana's Broadband Mapping Program which is taking place as part of the nationwide NTIA Broadband Data and Development Program. The Broadband Mapping team is available to discuss variations that may be more suitable for specific broadband service providers, and will seek to accommodate your organization's needs wherever possible. We welcome your questions or comments. Direct your questions or comments to Jim Sparks, (317) 234-5889, [jsparks@iot.in.gov](mailto:jsparks@iot.in.gov).

### Overview

Under this national program, broadband service providers are required to provide information regarding the availability and delivery of broadband services if their company or organization:

- Offers broadband services to end users in Indiana, or could do so within a typical service interval (7 to 10 business days) without extraordinary effort, or
- Owns facilities in Indiana that make possible the delivery of broadband services by other companies meeting the description above.

For the purposes of this Program, the following definitions are being used:

- "Broadband service" is the provision, on either a commercial or noncommercial basis, of data transmission technology that provides data transmission to and from the Internet with advertised speeds of at least 768 kilobits per second (kbps) downstream, and greater than 200 kbps upstream, to end users.
- An "end user" of broadband service is a residential or business party, institution, or state or local government entity that may use broadband Internet service for its own purposes, and that does not resell such service to other entities or incorporate such service into retail Internet-access services that it provides. (For this purpose, Internet Service Providers {ISPs} are not "end users.")
- A "facilities-based" broadband provider offers service connections to end user locations if the company or organization:
  - (1) Owns the portion of the physical facility that terminates at the end user location
  - (2) Obtains unbundled network elements (UNEs), special access lines or other leased facilities that terminate at the end user location and supplies or equips them as broadband, or
  - (3) Supplies or equips a broadband wireless channel to the end user location over licensed or unlicensed spectrums.
  - (4) Broadband service is "available" at an address if the provider offers, or could offer within a typical service interval (7 to 10 business days) without an extraordinary commitment of resources, data transmission to and from the Internet with advertised speeds of at least 768 kbps downstream, and greater than 200 kbps upstream, to end-users at that address.

## Submission Options

Data submission options and the type of data required vary based on the type of service provider:

1. **For Wireline Services to specific end user locations** you may report availability and service characteristics by any of the following:
  - a. Specific Address
  - b. Street Segment – using US Census 2009 TIGER/Line Files ([www.census.gov/geo/www/tiger/](http://www.census.gov/geo/www/tiger/))
  - c. Census Block (using the “current” version on the US Census website - [www.census.gov](http://www.census.gov))
  - d. *Census blocks larger than two square miles in area* must be reported either by Specific Address or by Street Segment as described above. Please note that in all cases, wireline broadband availability will be aggregated to Census Block (for blocks < 2 sq mi) or Street Segment (for blocks > 2 sq mi) as per the NTIA specifications, and in no case will specific address data be transmitted to NTIA or included in the Indiana or federal broadband map.
2. **For Wireless Services** you may report availability via a Geographic Information System (GIS) - compatible format depicting the areas in which your company or organization’s services are available to end users. The Indiana Broadband Mapping team is able to work with a wide variety of GIS data formats. Please contact us to discuss specific data format issues.
3. **For Middle-mile and/or Backbone Interconnection Points**, please see the section with the same name on page X.

## Service Characteristics and Record Formats

The following Record Format tables describe the minimum required fields to be included with each data submission. Additional fields may be added as needed to accurately describe availability and service characteristics, or to uniquely identify each record.

**Table 1: Record Format for Availability and Service Characteristics**  
**Reported at Address Level (for NTIA deliverable 1.a)**

| Field                      | Description  | Type    | Example                                   |
|----------------------------|--|---------|---|
| Provider Name              | Provider Name  | Text    | ABC Co.                                   |
| DBA Name                   | “Doing-business-as” name   | Text    | Superfone, Inc.                           |
| FRN                        | Provider’s FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> )  | Integer | 0048402202                                |
| Street Address             | Complete street address including Zip Code.<br><i>Addresses can be reported in separate fields by address components or as one text string as the example to the right illustrates.</i>  | Text    | 2340 W Herrick Road<br>Pine Bush IN 12566 |
| Technology of Transmission | Technology of Transmission available for the provision of service at the address (see Appendix for codes).   | Integer | 50  |
| Typical Downstream Speed   | Speed Tier Code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes). | Integer | 8   |
| Typical Upstream Speed     | Speed Tier Code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes).     | Integer | 8   |

Submit your coverage area in a spreadsheet, delimited text, database, or GIS compatible format using this naming convention: IN\_ProviderSpecificFRN\_address\_availability.xxx (GIS compatible files must be accompanied by metadata or a plain text “readme” file that contains the coordinate system information.)

**Table 2: Record Format for Availability and Service Characteristics**  
**Reported at Census Block Level (for NTIA deliverable 1.a)**

| Field                      | Description  | Type             | Example         |
|----------------------------|--|------------------|-----------------|
| Provider Name              | Provider Name  | Text             | ABC Co.         |
| DBA Name                   | “Doing-business-as” name   | Text             | Superfone, Inc. |
| FRN                        | Provider’s FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> )  | Integer          | 0048402202      |
| Census Block ID            | Numeric identifier for the US Census Block being reported.   | 15-digit Integer | 360010001001000 |
| Technology of Transmission | Technology of Transmission available for the provision of service at the address (see Appendix for codes).   | Integer          | 50              |
| Typical Downstream Speed   | Speed Tier Code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes). | Integer          | 8               |
| Typical Upstream Speed     | Speed Tier Code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes).     | Integer          | 8               |

Submit your coverage area in a spreadsheet, delimited text, database, or GIS compatible format using this naming convention: IN\_*ProviderSpecificFRN\_census\_block\_availability*.xxx (GIS compatible files must be accompanied by metadata or a plain text “readme” file that contains the coordinate system information.)

**Table 3: Record Format for Availability and Service Characteristics**  
**Reported at Street Segment Level (for NTIA deliverable 1.a)**

| Field                      | Description   | Type    | Example  |
|----------------------------|---|---------|--|
| Provider Name              | Provider Name   | Text    | ABC Co.  |
| DBA Name                   | “Doing-business-as” name  | Text    | Superfone, Inc.  |
| FRN                        | Provider’s FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> )   | Integer | 0048402202   |
| Street Name                | Complete street name.   | Text    | W Herrick Road   |
| Street Segment ID          | Unique identifier for the US Census Bureau’s TIGER/Line Files or CSCIC-supplied INDIANA street segments. Contact the INDIANA Broadband Mapping team for more information.   | Integer | <i>TIGER</i> : 221835907<br><br><i>CSCIC</i> : 443288567 |
| Technology of Transmission | Technology of Transmission available for the provision of service at the address (see Appendix for codes).  | Integer | 50   |
| Typical Downstream Speed   | Speed Tier Code for the downstream data transfer throughput rate that most <i>typical</i> subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes). | Integer | 8  |
| Typical Upstream Speed     | Speed Tier Code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes).                    | Integer | 8  |

Submit your coverage area in a spreadsheet, delimited text, database, or GIS compatible format using this naming convention: IN\_*ProviderSpecificFRN\_street\_segment\_availability*.xxx (GIS compatible files must be accompanied by metadata or a plain text “readme” file that contains the coordinate system information.)

**Table 4: Record Format for Wireline Maximum Advertised Speeds  
Reported at Cellular Market Area Level (for NTIA deliverable 1.a)**

| Field                               | Description   | Type    | Example         |
|-------------------------------------|---|---------|-----------------|
| Provider Name                       | Provider Name   | Text    | ABC Co.         |
| DBA Name                            | “Doing-business-as” name  | Text    | Superfone, Inc. |
| FRN                                 | Provider’s FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> )   | Integer | 48402202        |
| Cellular Market Area                | Report using MSA/RSA boundaries and associated codes available for download at<br><a href="http://wireless.fcc.gov/geographic/index.htm?job=market_boundary_files">http://wireless.fcc.gov/geographic/index.htm?job=market_boundary_files</a> . | Integer | 562             |
| Maximum Advertised Downstream Speed | Speed Tier Code for the maximum advertised downstream speeds available within each CMA (see Appendix for codes).  | Integer | 8               |
| Maximum Advertised Upstream Speed   | Speed Tier Code for the maximum advertised upstream speed available within each CMA (see Appendix for codes).   | Integer | 8               |

Submit your coverage area in a spreadsheet, delimited text, database, or GIS compatible format using this naming convention: IN\_*ProviderSpecificFRN\_CMA*\_advertised.xxx (GIS compatible files must be accompanied by metadata or a plain text “readme” file that contains the coordinate system information.)

**Table 5: Record Format for Availability and Service Characteristics**  
**Reported in Connection with Wireless Services (for NTIA deliverable 1.b)**

| Field                               | Description  | Type    | Example         |
|-------------------------------------|--|---------|-----------------|
| Provider Name                       | Provider Name  | Text    | ABC Co.         |
| DBA Name                            | “Doing-business-as” name   | Text    | Superfone, Inc. |
| FRN                                 | Provider’s FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> )  | Integer | 0048402202      |
| Technology of Transmission          | Technology of Transmission for the provision of service at the address (see Appendix for codes).   | Integer | 41              |
| Spectrum 1                          | If technology of transmission is Wireless, is Cellular Spectrum (824-849 MHz; 862-869 MHz) used to provide service? (Y/N)  | Text    | Y               |
| Spectrum 2                          | If technology of transmission is Wireless, is 700 MHz Spectrum (698-758 MHz; 775-788 MHz; 805-806 MHz) used to provide service? (Y/N)  | Text    | Y               |
| Spectrum 3                          | If technology of transmission is Wireless, is Broadband Personal Communications Services Spectrum (1850-1915 MHz; 1930-1995 MHz) used to provide service? (Y/N)  | Text    | Y               |
| Spectrum 4                          | If technology of transmission is Wireless, is Advanced Wireless Services Spectrum (1710-1755 MHz; 2100-2155 MHz) used to provide service? (Y/N)  | Text    | N               |
| Spectrum 5                          | If technology of transmission is Wireless, is Broadband Radio Service/Educational Broadband Service Spectrum (2496-2690 MHz) used to provide service? (Y/N)  | Text    | N               |
| Spectrum 6                          | If technology of transmission is Wireless, is Unlicensed (including broadcast television “white spaces”) Spectrum used to provide service? (Y/N)   | Text    | N               |
| Spectrum 7                          | If technology of transmission is Wireless, but the spectrum used to provide services is not listed above, please identify as one of the following: <i>Specialized Mobile Radio (SMR)</i> Service (817-824 MHz; 862-869 MHz; 896-901 MHz; 935-940 MHz), <i>Wireless Communications Service (WCS)</i> spectrum (2305-2320 MHz; 2345-2360 MHz, 3650-3700 MHz), <i>Satellite</i> (L-band, big LEO, Little LEO, 2 GHz). | Text    | SMR             |
| Maximum Advertised Downstream Speed | Speed Tier Code for the maximum advertised downstream speeds available within each polygon within a service area or local franchise area. (See Appendix for codes.)  | Integer | 8               |
| Maximum Advertised Upstream Speed   | Speed Tier Code for the maximum advertised upstream speeds within each polygon within a service area or local franchise area. (See Appendix for codes.)  | Integer | 8               |
| Typical Downstream Speed            | Speed Tier Code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes).   | Integer | 8               |
| Typical Upstream Speed              | Speed Tier Code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix for codes).   | Integer | 8               |

**Additional Information for Table 5:**

1. Submit your coverage area in a GIS compatible format using the naming convention: *IN\_ProviderSpecificFRN\_wireless\_availability.xxx*
2. All map areas must be closed, non-overlapping polygons with a single, unique identifier.
3. Any variation in any of the required fields necessitates the creation of a separate closed, non-overlapping polygon.

In cases where unlicensed frequencies are being reported, specify the **frequency** as text in the last field (“Spectrum Used”).

4. GIS compatible files must be accompanied by metadata or a plain text “readme” file that contains a comprehensive explanation of the methodology employed to generate the map layer including coordinate system information, any necessary assumptions, and an assessment of the accuracy of the finished product.

**Table 6: Record Format for Subscriber-Weighted Nominal Speed  
in Provider’s Service Area or Local Franchise Area (for NTIA deliverable 2.a)**

| Field                             | Description   | Type    | Example         |
|-----------------------------------|---|---------|-----------------|
| Provider Name                     | Provider Name   | Text    | ABC Co.         |
| DBA Name                          | “Doing-business-as” name  | Text    | Superfone, Inc. |
| FRN                               | Provider’s FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> )   | Integer | 0048402202      |
| Cellular Market Area              | Report using MSA/RSA boundaries and associated codes available for download at<br><a href="http://wireless.fcc.gov/geographic/index.htm?job=market_boundary_files">http://wireless.fcc.gov/geographic/index.htm?job=market_boundary_files</a> . | Integer | 562             |
| Technology of Transmission        | Technology of Transmission used in the provision of service (see Appendix for codes).   | Integer | 2               |
| Subscriber-Weighted Nominal Speed | Subscriber-weighted nominal speed (blended average rate in kbps). (See information below.)  | Float   | 2753.3          |

Submit your data in a spreadsheet, delimited text, database, or GIS compatible format using this naming convention: *IN\_ProviderSpecificFRN\_subscriber\_weighted\_nominal\_speed.xxx* (GIS compatible files must be accompanied by metadata or a plain text “readme” file that contains the coordinate system information.)



A provider's **Subscriber-Weighted Nominal Speed** (in kbps) should be calculated as *the sum of the products of the provider's advertised maximum download data transmission rate (in kbps) for each residential rate tier advertised by the provider in the Metropolitan Statistical Area (MSA) or Rural Statistical Area (RSA), times the average monthly number of residential subscribers receiving the advertised download transmission rate tier for the relevant reporting month (i.e., June or December, as applicable), divided by the average total number of residential subscribers for all the included data transmission rate tiers in the county for that month.*

This is expressed in the following formula:

$$\frac{(\text{speed tier-1 in kbps} \times \text{no. of tier-1 subscribers}) + (\text{speed tier-2 in kbps} \times \text{no. of tier-2 subscribers}) + \dots}{\text{total average monthly subscribers}}$$

For example, if the provider offers two tiers of service with advertised maximum download speeds of 1500 kbps to 1000 customers and 6000 kbps to 500 customers, *calculate the product of 1500 kbps times the average monthly number of residential subscribers (1000) to the 1500 kbps speed tier, plus the product of 6000 kbps times the average monthly number of residential subscribers to the 6000 kbps speed tier (500) and divide the sum by the sum (or total) of the average monthly number of residential subscribers in both tiers:*

$$\frac{(\text{1500 kbps} \times \text{1000 subscribers}) + (\text{6000 kbps} \times \text{500 subscribers})}{\text{1500}}$$

$$\text{Subscriber-Weighted Nominal Speed} = 3000 \text{ kbps}$$

### **Middle-mile and Backbone Interconnection Points**

Middle-mile and Backbone Interconnection Points typically enable relatively fast data rates, are built to handle substantial capacities, and may be service-quality assured.

Examples might include points of interconnection enabling communications between:

- An incumbent local exchange carrier central office and the Internet
- A cable aggregation point (headend) and the Internet, or between
- A wireless base station and the provider's core network elements that connect to other networks including the Internet.

Middle-mile and Backbone Interconnection Point information should focus on the connectivity at a point. That is, if a point at which network elements or segments are joined would not reasonably offer the possibility of technical connectivity with the network[s], it should not be reported.

Providers must submit a list of Interconnection Points of facilities that provide connectivity between:

- a) a service provider's network elements (or segments) or
- b) a service provider's network and another provider's network, including the Internet backbone.

Collectively, (a) and (b) are "middle-mile and backbone interconnection points."

Middle-mile and Backbone Interconnection Points data may be submitted as a tabular list (for example, a Microsoft Excel file) or as a GIS compatible file. GIS compatible files must be accompanied by metadata or a plain text “read me” file that contains a comprehensive explanation of the methodology employed to generate the map layer including coordinate system information, any necessary assumptions, and an assessment of the accuracy of the finished product.

If geographic coordinates of the points are not known, CSCIC can determine them for you as long as you provide a sufficient location description, such as street address or distance from street intersections or other landmarks that can be located on a map.

**Table 7: Record Format for Middle-mile and  
Backbone Interconnection Points Data for Each Provider (for NTIA deliverable 3.b)**

| Field  | Description   | Type    | Example                                       |
|--|---|---------|---|
| Provider Name  | Provider Name   | Text    | ABC Co.                                       |
| DBA Name   | “Doing-business-as” name  | Text    | Superfone, Inc.                               |
| FRN  | Provider’s FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> )                               | Integer | 0048402202                                    |
| Ownership  | Is the facility owned (0) or leased (1)?  | Integer | 0   |
| Serving Facility Capacity                                    | Serving Facility Code (see Table 7)   | Integer | 1   |
| Serving Facility Type  | Type of transport facility (1=Fiber, 2=Copper, 3=Hybrid Fiber Coax {HFC}, 4=Wireless) (See codes below.)  | Integer | 1   |
| Latitude   | Latitude in decimal degrees (a minimum of 4 digits to the right of the decimal is required)   | Float   | 42.65260                                      |
| Longitude  | Longitude in decimal degrees (a minimum of 4 digits to the right of the decimal is required)  | Float   | -73.75733                                     |
| Street Address<br><br>(if unable to provide coordinate data) | Complete street address including Zip Code.<br><i>Addresses can be reported in separate fields by address components or as one text string as the example to the right illustrates.</i> | Text    | 2340 W Herrick Road<br><br>Pine Bush IN 12566 |
| Elevation  | Elevation relative to grade to the nearest foot. (Positive integers indicate above-grade, negative indicate below-grade.) (See details below.)  | Integer | -10   |

Submit your coverage area in a spreadsheet, delimited text, database, or GIS compatible format using the naming convention: IN\_*ProviderSpecific*FRN\_Middle\_Mile.xxx

**Serving Facility Codes**

Express the serving facility’s capacity as currently configured:

| <b>Data Rate Code</b> | <b>Interconnection Point Data Rate</b>                   |
|-----------------------|--|
| 1                     | Multiple T1s and less than 40 mbps                       |
| 2                     | Greater than 40 mbps and less than 150 mbps              |
| 3                     | Greater than 150 mbps and less than 600 mbps             |
| 4                     | Greater than or equal to 600 mbps and less than 2.4 gbps |
| 5                     | Greater than or equal to 2.4 gbps and less than 10 gbps  |
| 6                     | Greater than or equal to 10 gbps                         |

**Elevation** pertains to whether interconnection points are in vaults below grade (i.e., manhole accessible), in interconnection hotels (above grade), or as part of aerial plant (well above grade). Providers should report the elevation of the point of connectivity, which will usually be zero for towers constructed on the ground. Providers should use reasonable efforts to provide accurate elevation data.

## Provider Footprint

Though not specifically required by the NTIA, CSCIC requests that wireline and wireless service providers supply a GIS compatible data file that identifies your company or organization's entire service area. Cable providers may alternatively supply a list of municipalities for which your company has franchise agreements to offer service. Provider footprints will be highly beneficial for data validation, independent speed test sampling, and other relevant uses. Alternatively, provider footprints can be conveyed to CSCIC via hardcopy maps. The INDIANA Broadband Mapping team will digitize those maps to meet the needs of the program.

If requested, the Broadband Mapping team will send you a hardcopy map of your general service area that can be marked up and returned. Please contact us if you would like a hardcopy sent to your company or organization.

**Table 8: Record Format for Provider Footprint**

| Field         | Description   | Type    | Example         |
|---------------|---|---------|-----------------|
| Provider Name | Provider Name   | Text    | ABC Co.         |
| DBA Name      | "Doing-business-as" name  | Text    | Superfone, Inc. |
| FRN           | Provider's FCC Registration Number<br>( <a href="https://fjallfoss.fcc.gov/coresWeb/publicHome.do">https://fjallfoss.fcc.gov/coresWeb/publicHome.do</a> ) | Integer | 0048402202      |

If you will be submitting information electronically, send your Provider Footprint data in a GIS compatible or spreadsheet format using the naming convention: *IN\_ProviderSpecificFRN\_footprint.xxx* (GIS compatible files must be accompanied by metadata or a plain text "readme" file that contains the coordinate system information.)

## Data Delivery Options

Consistent with the INDIANA Broadband Program's commitment to data confidentiality and the Program's Non-Disclosure Agreement, provider data can be submitted to the Indiana Broadband Mapping team via the following methods:

- Secure FTP Site – call for details
- DVD or CD mailed to:  
Jim Sparks  
100 North Senate Avenue, IGC N551  
Indianapolis, IN 46204

If you need additional information about these options, please contact Jim Sparks at (317) 234-5889 or [jsparks@iot.in.gov](mailto:jsparks@iot.in.gov).

## **Appendix**

**Technology of Transmission Codes:** Report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the **downstream** direction.

| <b>Technology Code</b> | <b>Description</b>                      | <b>Details</b>   |
|------------------------|---|--|
| 10                     | Asymmetric xDSL                         |  |
| 20                     | Symmetric xDSL                          |  |
| 30                     | Other Copper Wireline                   | All copper-wire based technologies other than xDSL (e.g., Ethernet over copper or T-1) |
| 40                     | Cable Modem – DOCSIS 3.0                |  |
| 41                     | Cable Modem – Other                     |  |
| 50                     | Optical Carrier/Fiber to the End User   | Fiber to the home or business (does not include “fiber to the curb”)                   |
| 60                     | Satellite                               |  |
| 70                     | Terrestrial Fixed Wireless – Unlicensed |  |
| 71                     | Terrestrial Fixed Wireless – Licensed   |  |
| 80                     | Terrestrial Mobile Wireless             |  |
| 90                     | Electric Power Line                     |  |
| 0                      | All Other                               | Any specific technology not listed above   |

**Speed Tier Codes:** Speed tiers should be entered as integers based on the following reference:

| <b>Upload Speed Tier</b> | <b>Download Speed Tier</b> | <b>Description</b>                                       |
|--------------------------|----------------------------|--|
| 1                        | --                         | Less than or equal to 200 kbps                           |
| 2                        | --                         | Greater than 200 kbps and less than 768 kbps             |
| 3                        | 3                          | Greater than or equal to 768 kbps and less than 1.5 mbps |
| 4                        | 4                          | Greater than or equal to 1.5 mbps and less than 3 mbps   |
| 5                        | 5                          | Greater than or equal to 3 mbps and less than 6 mbps     |
| 6                        | 6                          | Greater than or equal to 6 mbps and less than 10 mbps    |
| 7                        | 7                          | Greater than or equal to 10 mbps and less than 25 mbps   |
| 8                        | 8                          | Greater than or equal to 25 mbps and less than 50 mbps   |
| 9                        | 9                          | Greater than or equal to 50 mbps and less than 100 mbps  |
| 10                       | 10                         | Greater than or equal to 100 mbps and less than 1 gbps   |
| 11                       | 11                         | Greater than or equal to 1 gbps                          |